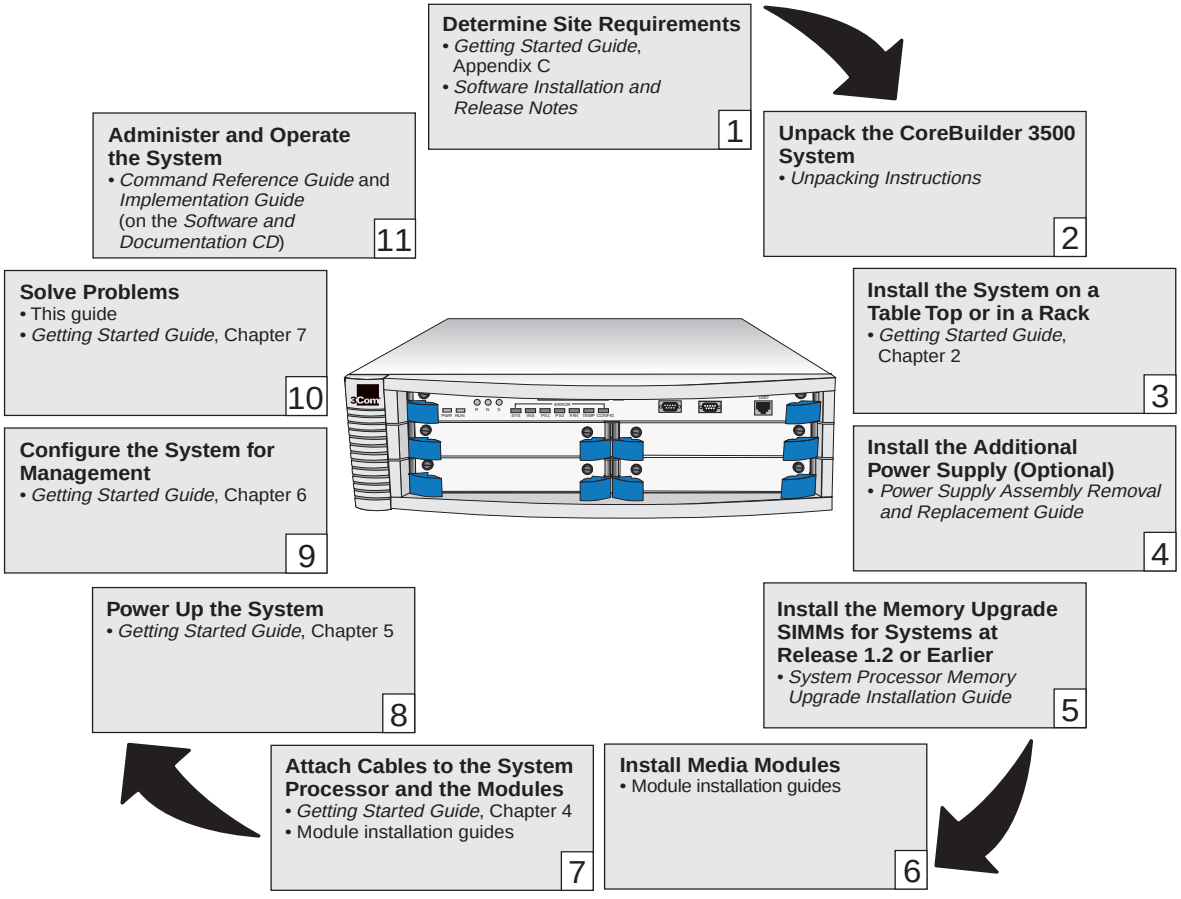
# Quick Installation Guide

**For the CoreBuilder® 3500 System**

This guide provides quick installation procedures for the CoreBuilder® 3500 system. It is intended for the network administrator who has experience installing communications equipment.

## System Setup Tasks

To get your system and its components to the state at which you can connect to your network, follow the setup tasks in the figure. If you need more information on each setup task, see the related sections in this guide or the complete details in the indicated documents.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## Installing the System

To install the system in your network, follow the steps in this section.

***WARNING:*** *For safety reasons and to ensure adequate cooling airflow, install blank faceplates over all empty slots.*

### Determine Site Requirements 1

Install the system in an area that meets the requirements in Table 1.

**Table 1** System Site Requirements

| **Location** |
|---|
| ■ Ambient (room) temperature — 0 to 50 °C (32 to 122 °F) at sea level |
| ■ Operating humidity — 10% to 90% relative humidity, noncondensing |
| ■ Storage humidity — 10% to 95% relative humidity, noncondensing |
| ■ A level surface for system installation |
| **Power** |
| ■ Heat dissipation — 362 Watts |
| ■ Power source location — Power source within approximately 1.8 meters (6 feet) |
| ■ Input voltage options — 90 VAC to 264 VAC |
| ■ Current rating — 100 VAC at 3.8 amperes (maximum); 240 VAC at 1.5 amperes (maximum) |

For more information, see Appendix A "System Specifications" and Appendix C "Site Requirements and Safety Codes" in the *Getting Started Guide*.

### Unpack the System 2

Check the packing slip to verify that you have all components.

The system is shipped with one system processor module and one power supply installed. If you have ordered a second power supply for the system, be sure that it is available for installation.

**Install the System** 3

## Before You Begin

Before you install the system:

- Move the system close to where you plan to install it, and close to a power receptacle.
- Have a No. 2 Phillips screwdriver available.
- Have the hardware kit available. See Table 2.

**Table 2** System Hardware Mounting Kit

| Item | Qty | Use in |
|---|---|---|
| Rubber feet (self-adhesive) | 4 | Installing the system on a table top |
| Mounting brackets | 2 | Installing the system in the distribution rack |
| 8-32 x 1/2 Phillips flat-head screws | 8 | Installing the distribution rack mounting brackets |
| 10-32 x 1/2 Phillips pan-head screws | 4 | Installing the system in the distribution rack |

Determine whether you are installing the system on a tabletop or in a distribution rack.

For complete installation instructions, see the chapter on "Installing the System" in the *Getting Started Guide*.

***WARNING:*** *Hazardous energy exists within the system. Always be careful to avoid electric shock or equipment damage. Many installation and troubleshooting procedures should be performed only by trained technical personnel.*

## Install Optional Power Supply 4

The system operates using a single power supply assembly and is shipped with one power supply installed. You can add a second power supply to the system. The additional power supply is orderable and shipped separately.

***WARNING:*** *Removal or replacement of a power supply is to be performed by trained technical personnel only. Do not attempt to remove or replace a power supply if you do not have the proper training from 3Com. For training information, call 1-800-NET-3COM in the United States and Canada. For training information elsewhere, visit the 3Com Website at www.3com.com.*

For installation instructions, see the *Power Supply Assembly Removal and Replacement Guide* or Appendix B in the *Getting Started Guide*.

## Install Optional Memory Upgrade 5

If your system processor is running system software at Release 1.2 or earlier, you must install the Expansion Memory Kit (3Com Part Number 3C35010) before you can run Release 2 or 3 of the system software. Table 3 lists the memory configuration as shipped from the factory at Release 1.2 or earlier, together with the Application Processor (AP), Frame Processor (FP) and Flash memory sizes after you have installed the Expansion Memory Kit.

To see the size of memory on your system, enter **`system display`** in the Administration Console.

*Additional memory for your system is provided in packages called Single In-line Memory Modules* (SIMMs). *When you upgrade the system memory, you must upgrade all three memory SIMMs.*

***CAUTION:*** *To prevent damage to components when you handle them, always wear an electrostatic discharge (ESD) wrist strap. Verify that the strap makes good skin contact and that you are properly grounded.*

**Table 3** System Memory Configuration at Release 1.2 or Earlier

| Memory Location | Factory-Installed Memory (MB) | Available Expanded Memory (MB) | Part Number | Total Memory (MB) |
|---|---|---|---|---|
| Application Processor | 16 (on board) | 16 SIMM | 10001299 | 32 |
| Frame Processor | 4 (on board) | 16 SIMM | 10001299 | 20 |
| Flash | 8 (on board) | 8 SIMM | 531-00007-000 | 16 |

For installation instructions, see the *System Processor Memory Upgrade Installation Guide*.

**Install Media Modules** 6

You are now ready to install the media modules. For instructions, see the *Module Installation Guide* that is shipped with each module or the chapter on "Installing Modules" in the *Getting Started Guide*.

***CAUTION:*** *Electrostatic discharge (ESD) can damage components on a module, causing complete or intermittent failures. ESD damage occurs when the module is improperly handled. Before you handle a module, be sure to read and follow the ESD safety information that is provided in the* Module Installation Guide.

**Cable Processor and Media Modules** 7

Cable your system to connect the system processor ports and media modules to your network.

For information on cabling system processor ports and media modules, see the chapter on cabling in the *Getting Started Guide* or the installation guide for each module.

## Power Up the System 8

To get your system powered up and ready to operate:

1 Verify that each unused slot is covered with a blank faceplate.

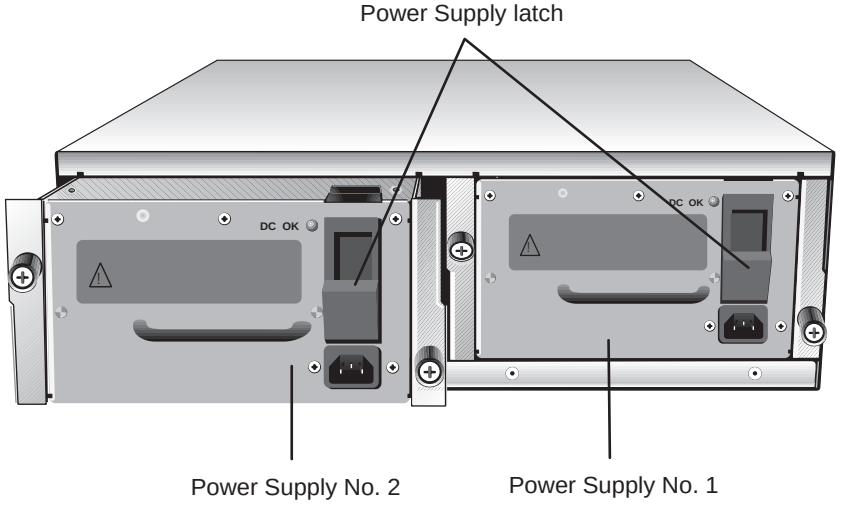
*To view possible error messages while the system is running power-up diagnostics, connect a terminal, workstation, or PC with terminal emulation software to the system's terminal serial port. See the next section and Table 5.*

2 On the back panel, insert the power cord into the power receptacle. See .

***CAUTION:*** *To prevent a possible fire hazard, verify that the power cord is fully inserted.*

If the spring-loaded power supply latch partially covers the power receptacle, it is because the power supply is not fully inserted and the locking pin cannot fully extend into its slot.

**Figure 1** System Power Receptacle




3 Insert the other end of the power cable into a power outlet.

4 Repeat steps 2 and 3 for the second power supply if you have one.

### Power-up Diagnostics

The system runs diagnostic software at power up. This software verifies that every component in the system is operating correctly.

If any component fails during power-up diagnostics, the system either fails to power up or the faulty module comes up but all of its ports are out of service. When the system comes up, verify which modules, if any, have failed diagnostics by checking the module LEDs against the tables in the module installation guides or by viewing the system configuration display in the Administration Console (if you have connected the system to a workstation) or in the System Summary form on the WebConsole.

During power up, the system processor LEDs provide information on components in your system, as shown in Table 4.

**Table 4** System Diagnostics — System Processor LED Activity

| LED Name | Color | Description |
|---|---|---|
| **PWR** | Steady green | System is receiving power. |
| **RUN** | Steady green | System is running diagnostics. |
| | Blinking green | System is operational. |
| **PSI** or **PS2** | Steady yellow | Additional power supply, if installed, is not plugged in or is out of specification. |
| **SYS** | Steady yellow | System processor has failed. |
| | Blinking yellow | A hardware/software mismatch has occurred. |

## Configure System for Management 9

Your system is shipped from the factory with IEEE 802.1D Spanning Tree bridging disabled. To configure system features for your particular networking environment, you must first establish management access.

Initially, you can only manage your system locally through a direct terminal connection to the terminal serial port. You use this interface to configure additional access mechanisms, as shown in Table 5.

For more information on access mechanisms, see chapter on "Quick Setup for Management Access" in the *Getting Started Guide*.

**Table 5** Management Access Mechanisms

| Access Mechanism | Access Description | Interface |
|---|---|---|
| Terminal | Access the Administration Console locally and stay attached during system reboots | Terminal serial port |
| Modem | Access the Administration Console from remote sites | Modem serial port |
| IP | ■ Access the Administration Console using Telnet commands<br>OR<br>■ Use an external SNMP management application to communicate with the SNMP agent<br>OR<br>■ Access the system's Web Management software across the Internet with a Web browser | Port assigned an IP address |

### Defining a Management Interface

You define a management interface in one of two ways:

- **Out-of-band** — This method uses a dedicated network for management data. A management interface must be configured for the out-of-band Ethernet port on the system processor module.
- **In-band** — This method manages the system and its attached LANs over the same network that carries your regular data traffic. An IP address must be configured on a port on an installed media module. You can use any media type.

For detailed information on defining a management interface, see the chapter on "Management Access" in the *Implementation Guide*.

*Out-of-band interface*

To define a management interface on the system processor for out-of-band management:

1. From the top level of the Administration Console, enter:

   **`management ip interface define`**

   The system prompts you for the interface parameters. To accept the current value shown in brackets at any prompt, press Return.
2. Enter the IP address of the management interface.
3. Enter the subnet mask of the management interface.

*In-band interface*

You can define a VLAN or a port-based router interface for in-band management.

*In-band VLAN-based interface*

To define a VLAN-based management interface on a media module port for in-band management:

1. Define an IP VLAN as described in the chapter on VLANs in the *Command Reference Guide*.
2. Define an IP interface. From the top level of the Administration Console, enter:

   **`ip interface define`**

   The system prompts you for the interface parameters. To accept the current value shown in brackets at any prompt, press Return.
3. Enter the IP address of the management interface.
4. Enter the subnet mask of the management interface.
5. Enter **`vlan`**
6. Enter the index of the VLAN to associate with the interface.

Example:

```
Select menu option: ip interface define
Enter IP address: 158.101.134.62
Enter subnet mask [255.255.255.0]:
Enter interface type (vlan,port) [vlan]: vlan
Enter VLAN interface index {1-12,15|?}: 1
```

*In-band port-based interface*

As an alternative to a VLAN-based management interface, you can define a port-based router management interface for in-band management:

*If you use this type of management interface, all VLANs are removed, a default VLAN is created, and the VLAN mode changes to allClosed.*

To define a port-based interface:

1. Define an IP interface. From the top level of the Administration Console, enter:

   **ip interface define**

   The system prompts you for the interface parameters. To accept the current value shown in brackets at any prompt, press Return.

2. Enter the IP address of the management interface.
3. Enter the subnet mask of the management interface.
4. Enter **port**
5. The system informs you what will happen to the current VLAN configuration if you choose to continue with **yes**
6. Enter the bridge port number.

   Example:

```
Select menu option: ip interface define
Enter IP address: 158.101.134.62
Enter subnet mask [255.255.255.0]:
Enter interface type (vlan,port) [vlan]: port
VLAN mode must be changed to allClosed to support this interface.
This will remove all VLANs, then re-create the
                  Default VLAN - continue? (n,y) [y]: y
Select bridge port {1-12,15|?}: 1
```

These management access mechanisms are described more completely in the "Quick Setup for Management Access" chapter in the *Getting Starting Guide* and the "Management Access" chapter in the *Implementation Guide*.

## Solve Problems 10

Table 6, Table 7, and Table 8 explain how to identify and correct certain system problems and suggest some things to do if you cannot resolve a problem. See "Technical Support" on page 15 for details.

**Table 6** Troubleshooting Power Failures

| Symptom | Possible Sources of Problem and Steps to Take |
|---|---|
| System does not power up. | Possible sources of problem:<br>■ System is not receiving power.<br>■ Power supply has malfunctioned.<br>Recommended actions:<br>**1** Verify that the building's power outlet has power.<br>**2** Check that the power cord is firmly inserted in the system and into the building's power outlet.<br>**3** If the system still does not operate, contact your network supplier or 3Com Technical Support. |

**Table 7** Troubleshooting Abnormal Status on System Processor LEDs

| LED Status | Possible Sources of Problem and Steps to Take |
|---|---|
| **RUN** LED does not light. | Possible source of problem:<br>■ Diagnostic software is not running.<br>Recommended actions:<br>■ Contact your network supplier or 3Com Technical Support. |
| **PS1** or **PS2** LED lights yellow. | Possible sources of problem:<br>■ Power supply is not fully inserted.<br>■ Power supply is out of specification.<br>Recommended actions:<br>**1** Verify that the power cord is fully inserted at both ends.<br>**2** If the system still does not operate, contact your network supplier or 3Com Technical Support. |
| **SYS** LED lights yellow. | Possible source of problem:<br>■ System processor has failed.<br>Recommended actions:<br>**1** Verify that the power cord is fully inserted at both ends.<br>**2** Contact your network supplier or 3Com Technical Support. |
| **SYS** LED blinks yellow. | Possible sources of problem:<br>■ Hardware/software mismatch<br>Recommended actions:<br>**1** If you have added a new module, remove it and reboot the system.<br>**2** If you have just updated software, reload the old version of software.<br>**3** Contact your network supplier or 3Com Technical Support for hardware/software incompatibility information. |

**Table 7** Troubleshooting Abnormal Status on System Processor LEDs (continued)

| LED Status | Possible Sources of Problem and Steps to Take |
|---|---|
| **TEMP** LED lights yellow. | Possible sources of problem:<br>■ System temperature is too high.<br>■ Wiring closet is too hot.<br>■ System vents are blocked.<br>■ System fans are not operating.<br>■ System processor has failed.<br>■ Thermal sensor is faulty.<br>Recommended actions:<br>**1** Disconnect all power cords.<br>**2** Verify that the room temperature meets the system specifications. See Appendix A "System Specifications" in the *Getting Started Guide*.<br>**3** If the temperature is too high, lower the room thermostat and wait until the room temperature meets the specifications.<br>**4** Verify that nothing blocks the airflow around the system's vents.<br>**5** Verify that the system fans are working.<br>**6** Restart the system.<br>If the **TEMP** LED still lights, either the room temperature is still too high or the system processor is faulty.<br>**7** Disconnect all power cords and contact your network supplier or 3Com Technical Support. |
| **FAN** LED lights yellow. | Possible source of problem:<br>■ Fan has slowed or shut down.<br>Recommended actions:<br>**1** Disconnect all power cords.<br>If the system is not over temperature (that is, if the **TEMP** LED is not lit), you can continue to run the system until service is scheduled. However, the system should be serviced.<br>**2** Contact your network supplier or 3Com Technical Support. |

**Table 8** Troubleshooting Abnormal Activity on the Module Status LEDs

| Module LED Status | Possible Sources of Problem and Steps to Take |
|---|---|
| **PWR** LED lights yellow. | Possible source of problem:<br>■ Module is not fully inserted.<br>■ Module has failed.<br>Recommended actions:<br>■ Verify that the module is fully inserted.<br>■ Replace the module with a new one. |
| **INS** LED lights yellow. | Possible source of problem:<br>■ Module is partially inserted.<br>Recommended action:<br>■ Remove the module and reinsert it. |
| **ERR** LED lights yellow. | Possible source of problem:<br>■ Module did not successfully complete the power-up diagnostics.<br>Recommended actions:<br>■ Reboot the system.<br>■ If the **ERR** LED remains yellow, contact your network supplier or 3Com Technical Support. |
| **E** LED (Error - Port Status) lights yellow. | Possible source of problem:<br>■ Module did not successfully complete power-up diagnostics.<br>■ An error condition has occurred with the associated port, or the port has been disabled through the Administration Console or WebConsole.<br>Recommended actions:<br>**1** Verify that all cables are firmly inserted into the system's affected port and the attached device.<br>**2** Check the **L** LED (Link - Port Status).<br>**3** Test for faulty cables.<br>**4** If the **E** LED (Error - Port Status) remains yellow, contact your network supplier or 3Com Technical Support. |

**Administer and Operate System** 11

For information on how to administer and operate the system, see the *Command Reference Guide*, the *Command Quick Reference* booklet, the *Implementation Guide*, the *Software Installation and Release Notes*, and the *Web Management User Guide*.

## Technical Support

If you experience system problems that are not addressed in this guide, contact your network supplier or 3Com Technical Support. Before you call, gather the following information and have it available:

- System type and serial number
- Maintenance agreement or purchase date and warranty information (from the last two pages of the *Getting Started Guide* or the relevant module or field-replaceable unit installation guide)
- Software revision number
- Brief description of the problem

Some of this information can be viewed in the system display on the Administration Console. See the *Command Reference Guide* for more information.

For information on where to call, see Appendix D "Technical Support" in the *Getting Started Guide*.

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